Amendments to the Claims

1. (Currently Amended) A flat vibration motor having a swelling resistant rotator, comprising:

an upper case;

a lower case;

a conductive substrate formed on an upper surface of the lower case;

a magnet formed on the upper surface of the lower case, for generating magnetic field;

a conductive brush having an end electrically connected with the substrate;

a rotational shaft supported at an approximate center portion between the lower case and the upper case;

a coil swelling suppressing rotator having an upper rotor surface, a lower rotor surface, and an outer circumferential rotor surface inserted onto the rotational shaft to rotate and ~~formed of~~ having a resin base that forms all of the upper, lower and outer circumferential surfaces of the rotator;

a commutator formed on a lower surface of the rotator and connected to the other end of the brush; and

a coil ~~having an upper end,~~ which is positioned in the rotator below the ~~lower than an~~ upper ~~end~~ surface of the rotator;

wherein the ~~rotator in which the coil is placed~~ resin base suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the

vibration motor for connection to a substrate ~~covers all of the back side and outer, upper circumference of the coil~~.

2. (Currently Amended) The flat vibration motor of claim 1, wherein the coil is fixed to the base ~~by~~ which is an insert injection ~~molding~~ molded resin base.

3. (Currently Amended) The flat vibration motor of claim 1, further comprising a weight ~~formed~~ eccentrically located inside the rotator, for enhancing eccentricity of weight center of the rotator.

4. (Original) The flat vibration motor of claim 1, wherein the coil is fixed by the base.

5. (Original) The flat vibration motor of claim 1, wherein the coil is received inside the base so that the coil is firmly fixed when heated.

6. (Original) The flat vibration motor of claim 1, wherein the coil is received inside the base so that the coil is not observed at an upper surface of the rotator.

7. (Currently Amended) A flat vibration motor, comprising:

a case;

a rotational shaft standing at a center portion of the case;

a coil having a front side, a back side and an outer circumference side;

a coil swelling suppressing rotator ~~formed~~ rotatably supported upon a circumference of the rotational shaft and made of resin in which the coil is placed that covers all of the back side and outer~~, upper~~ circumference side of the coil;

the coil recessed into the rotator so that the coil is firmly fixed when heated; and

a power supply means for supplying a predetermined electric power to the coil,

wherein the resin suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the vibration motor for connection to a substrate.

8. (Currently Amended) The flat vibration motor of claim 7, wherein the coil is fixed to the base ~~by~~ which is an insert injection ~~molding~~ molded resin base.

9. (Currently Amended) The flat vibration motor of claim 7, further comprising:

a weight ~~formed~~ eccentrically located inside of the rotator, for enhancing eccentricity of weight center of the rotator.

10. (Original) The flat vibration motor of claim 7, wherein the coil has an upper portion formed at a position lower than an upper portion of the rotator so that the coil is firmly fixed when heated.

11. (Original) The flat vibration motor of claim 7, wherein the power supply means comprises:

a substrate formed on a surface of the case; and

a brush having both ends connected to the substrate and the rotator.

12. (Original) The flat vibration motor of claim 7, wherein the power supply means comprises:

a lower insulating fixer formed on a surface of the case;

a conductive terminal formed a lower surface of the lower fixer; and

a brush penetrating the lower fixer and having both ends connected to the terminal and the rotator.

13. (Currently Amended) A flat vibration motor, comprising:

an upper case having an open lower side;

a lower insulating fixer formed on the lower side of the upper case;

a magnet formed on an inner bottom surface of the upper case, for generating magnetic field;

a rotational shaft standing at a center portion of the upper case and the lower fixer;

a coil;

a coil swelling suppressing rotator inserted onto the rotational shaft and ~~formed of~~ having a base made of resin~~, for rotating,~~ that covers all of the ~~back~~ top side and outer~~, upper~~ circumference side of the coil;

a conductive terminal formed a lower side of the lower fixer;

a brush penetrating the lower fixer and having an end connected to the terminal and the other end connected to a commutator formed on a lower side of the rotator; and

the coil having an upper portion formed at a position lower than ~~an upper portion~~ a top side of the rotator;

wherein the resin suppresses expansion of the coil and prevents the coil from colliding with the upper case during surface mount heating of the vibration motor for connection to a substrate.

14. (Currently Amended) The flat vibration motor of claim 13, wherein the coil is located ~~formed~~ on the base ~~by~~ which is an insert injection ~~molding~~ molded resin base.

15. (Currently Amended) The flat vibration motor of claim 13, further comprising:

a weight ~~formed~~ eccentrically located inside of the rotator, for enhancing eccentricity of weight center of the rotator.

16. (Original) The flat vibration motor of claim 13, wherein the coil is received inside the base so that the coil is firmly fixed when heated.

17. (Original) The flat vibration motor of claim 13, wherein the coil is received inside the base so that the coil is not observed at an upper surface of the rotator.

18. (Currently Amended) A flat vibration motor, comprising:

a case;

a rotational shaft standing inside the case;

a coil having a top side, a bottom side and an outer circumference side;

a coil swelling suppressing rotator placed upon a circumference of the rotational shaft to accept a the coil so that all of the ~~top~~ side and outer~~, upper~~ circumference side of the coil are covered by the rotator;

~~a coil received in the rotator~~ so that the coil is not exposed to an exterior; and

a commutator and a brush for supplying a predetermined electric power to the coil;

wherein the rotator ~~is made of insert injection molding in which the coil is placed~~ suppresses expansion of the coil and prevents the coil from colliding with the case during surface mount heating of the vibration motor for connection to a substrate.

19. (Currently Amended) The flat vibration motor of claim 18, wherein the ~~coil is formed on the base made of resin by insert injection molding~~ rotator comprises an injection molded resin.